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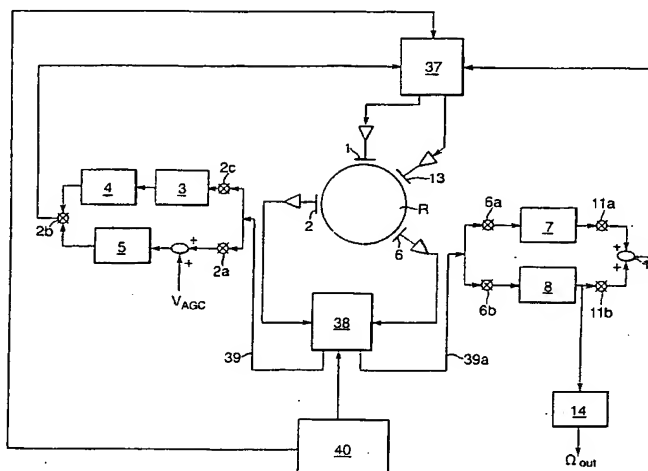
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- (71) Applicant (*for all designated States except US*): BAE SYSTEMS PLC [GB/GB]; 6 Carlton Gardens, London SW1Y 5AD (GB).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): FELL, Christopher, Paul [GB/GB]; BAE Systems (Operations) Limited, Clittaford Road, Southway, Plymouth, Devon PL6 6DE (GB). TOWNSEND, Kevin [GB/GB]; BAE Systems (Operations) Limited, Clittaford Road, Southway, Plymouth, Devon PL6 6DE (GB). KAZER, Andrew [GB/GB]; BAE Systems (Operations) Limited, Clittaford Road, Southway, Plymouth, Devon PL6 6DE (GB).
- (74) Agent: GROUP IP DEPARTMENT; BAE Systems plc, Lancaster House, P.O. Box 87, Farnborough Aerospace Centre, Farnborough, Hampshire GU14 6YU (GB).
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- (54) Title:** METHOD AND APPARATUS FOR MEASURING SCALEFACTOR VARIATION IN A VIBRATING STRUCTURE GYROSCOPE



- (57) **Abstract:** Apparatus for measuring scale factor variation of a gyroscope having a vibrating structure (R), drive means (1, 13) for resonating the vibrating structure, pick-off means (2, 6) for detecting vibration of the vibrating structure, quadrature component loop (QCL) (7) and real component loop (RCL) systems (8), automatic gain control (AGC) (5) and phase locked loop (PLL) systems (22), a sin/cos pick off resolver (38) for receiving signals from the pick-off means and for outputting signals to the QCL, RCL, AGC and PLL systems, a sin/cos drive resolver (37) for receiving output signals from the QCL, RCL, AGC and PLL systems and for feeding control signals to the drive means and an angular displacement control-(ADC) (40) for feeding ADC signals to the sin/cos drive and pick-off resolvers to control uniform displacement of the resolved carrier and response mode drives and pick-offs axes angularly around the vibrating structure at a known rate.